CONTENTS

VOL. 16, NO. 1, FEBRUARY 1986

1 *David D. Hart and Steven C. Latta:* Determinants of ingestion rates in filter-feeding larval blackflies (Diptera: Simuliidae)

15 *J. C. Stager, P. N. Reinthal and D. A. Livingstone:* A 25,000-year history for Lake Victoria, East Africa, and some comments on its significance for the evolution of cichlid fishes

21 *R. Goulder:* Seasonal variation in the abundance and heterotrophic activity of suspended bacteria in two lowland rivers

39 *Bernard W. Sweeney, Robin L. Vannote and Peter J. Dodds:* The relative importance of temperature and diet to larval development and adult size of the winter stonefly, *Soyedina carolinensis* (Plecoptera: Nemouridae)

49 *J. A. Waringer:* The abundance and distribution of caddisflies (Insecta: Trichoptera) caught by emergence traps in the 'Ritrodat' research area of the Lunzer Seebach (Lower Austria) from 1980 to 1982

61 *István Tátrai:* Rates of ammonia release from sediments by chironomid larvae

67 *S. E. Bunn, D. H. Edward and N. R. Loneragan:* Spatial and temporal variation in the macroinvertebrate fauna of streams of the northern jarrah forest, Western Australia: community structure

93 *T. J. Pandian and M. Peter Marian:* An indirect procedure for the estimation of assimilation efficiency of aquatic insects

99 *Kenneth E. Giller and Bryan D. Wheeler:* Peat and peat water chemistry of a flood-plain fen in Broadland, Norfolk, U.K.

115 *D. Dudley Williams and Kathryn A. Moore:* Microhabitat selection by a stream-dwelling amphipod: a multivariate analysis approach

123 *D. W. Bowker, W. van Teutem and J. C. Fry:* A note on 'stomaching' for the quantitative sampling of epiphyton

Opinion

127 *Bernhard Statzner and Bert Higler:* Stream hydraulics as a major determinant of benthic invertebrate zonation patterns

141 **Book reviews**

VOL. 16, NO. 2, APRIL 1986

145 *N. A. Allott:* Temperature, oxygen and heat-budgets of six small western Irish lakes

155 *R. B. Aiken:* Diel activity of a boreal water beetle (*Dytiscus alaskanus*: Coleoptera; Dytiscidae) in the laboratory and field

161 *John A. Downing:* A regression technique for the estimation of epiphytic invertebrate populations

175 *Dean W. Blinn and J. Green:* A pump sampler study of microdistribution in Walker Lake, Arizona, U.S.A.: a sensescent crater lake

187 *Maurice A. Lock and Tim E. Ford:* Colloidal and dissolved organic carbon dynamics in undisturbed boreal forest catchments: a seasonal study of apparent molecular weight spectra

197 *Anne-Carole Chamier and L. G. Willoughby:* The role of fungi in the diet of the amphipod *Gammarus pulex* (L.): an enzymatic study

209 *J. Deniseger, A. Austin and W. P. Lucey:* Periphyton communites in a pristine mountain stream above and below heavy metal mining operations
219 *Warwick F. Vincent and Clive Howard-Williams:* Antarctic stream ecosystems: physiological ecology of a blue-green algal epilithon
235 *Mutsunori Tokeshi:* Population ecology of the commensal chironomid *Epoicocladius flavens* on its mayfly host *Ephemera danica*
245 *Peter Koefoed Bjørnsen, Jens Brenner Larsen, Ole Geertz-Hansen and Michael Olesen:* A field technique for the determination of zooplankton grazing on natural bacterioplankton
255 *Niels O. G. Jørgensen:* Fluxes of free amino acids in three Danish lakes
269 *Dominique Rosillon:* Life cycle, growth, mortality and production of *Ephemerella major* Klapalek (Ephemeroptera) in a trout stream in Belgium
279 *Alan J. Tessier:* Life history and body size evolution in *Holopedium gibberum* Zaddach (Crustacea, Cladocera)

VOL. 16, NO. 3, JUNE 1986

287 *David J. Behmer and Charles P. Hawkins:* Effects of overhead canopy on macroinvertebrate production in a Utah stream
301 *Carrie A. Rimes and R. Goulder:* Quantitative observations on the ability of epiphytic bacteria to contribute to the populations of suspended bacteria in two dissimilar headstreams
313 *L. C. Bowling, the late M. S. Steane and P. A. Tyler:* The spectral distribution and attenuation of underwater irradiance in Tasmanian inland waters
337 *Jane E. Rutherford and Rosemary J. Mackay:* Patterns of pupal mortality in field populations of *Hydropsyche* and *Cheumatopsyche* (Trichoptera: Hydropsychidae)
351 *R. C. Hart:* Zooplankton abundance, community structure and dynamics in relation to inorganic turbidity, and their implications for a potential fishery in subtropical Lake le Roux, South Africa
373 *Mark Diamond and Philip M. Wakefield:* The consumption of eggs of the perch, *Perca fluviatilis* L., by macroinvertebrates in the field
377 *Stuart Findlay, Judy L. Meyer and Phillip J. Smith:* Contribution of fungal biomass to the diet of a freshwater isopod (*Lirceus* sp.)
387 *Joseph M. Dirnberger and Stephen T. Threlkeld:* Advective effects of a reservoir flood on zooplankton abundance and dispersion
397 *N. L. Hywel-Jones and M. Ladle:* Ovipositional behaviour of *Simulium argyreatum* and *S. variegatum* and its relationship to infection by the fungus *Erynia conica* (Entomophthoraceae)
405 *J. M. Elliott and P. A. Tullett:* The effects of temperature, atmospheric pressure and season on the swimming activity of the medicinal leech, *Hirudo medicinalis* (Hirudinea; Hirudinidae), in a Lake District tarn
417 *István Tátrai and Vera Istvánovics:* The role of fish in the regulation of nutrient cycling in Lake Balaton, Hungary
425 **Book Reviews; Short Notices**

VOL. 16, NO. 4, AUGUST 1986

431 *Mutsunori Tokeshi:* Population dynamics, life histories and species richness in an epiphytic chironomid community
443 *Khalid Y. Al-Dabbagh and Jamal Y. Luka:* Population dynamics of the gastropod *Theodoxus jordani* (Sowerby) in the Shatt Al-Arab river

449 *Khalid Y. Al-Dabbagh and Jamal Y. Luka:* Respiration studies and population metabolism of the gastropod *Theodoxus jordani* (Sowerby)
455 *Nancy A. Erman:* Movements of self-marked caddisfly larvae, *Chyranda centralis* (Trichoptera: Limnephilidae), in a Sierran spring stream, California, U.S.A.
465 *J. O. Young and S. M. Spelling:* The incidence of predation on lake-dwelling leeches
479 *Laurence J. Bazer and Paul E. Fell:* Gemmules of *Anheteromeyenia ryderi* and *Heteromeyenia tubisperma* (Porifera: Spongillidae) from southern New England undergo diapause
485 *Caryn C. Vaughn:* The role of periphyton abundance and quality in the microdistribution of a stream grazer, *Helicopsyche borealis* (Trichoptera: Helicopsychidae)
495 *J. Green:* Zooplankton associations in some Ethiopian crater lakes
501 *S. J. Ormerod, N. Allinson, D. Hudson and Stephanie J. Tyler:* The distribution of breeding dippers (*Cinclus cinclus* (L.); Aves) in relation to stream acidity in upland Wales
509 *W. Southern, J. Ash, J. Brodie and P. Ryan:* The flora, fauna and water chemistry of Tagimaucia crater, a tropical highland lake and swamp in Fiji
521 *Jack W. Feminella and Kenneth W. Stewart:* Diet and predation by three leaf-associated stoneflies (Plecoptera) in an Arkansas mountain stream
539 *Michael P. Pendl and Kenton M. Stewart:* Variations in carbon fractions within a dimictic and a meromictic basin of the Junius Ponds, New York
557 *L. A. Giguère:* The estimation of crop evacuation rates in *Chaoborus* larvae (Diptera: Chaoboridae) using natural prey
561 *J. O. Young and R. M. Procter:* Are the lake-dwelling leeches, *Glossiphonia complanata* (L.) and *Helobdella stagnalis* (L.), opportunistic predators on molluscs and do they partition this food resource?

Opinion
567 *Amyan Macfadyen:* On Harris's opinions about nesting behaviour and other matters

571 **Book Reviews**

VOL. 16, NO. 5, OCTOBER 1986

573 *J. T. O. Kirk and P. A. Tyler:* The spectral absorption and scattering properties of dissolved and particulate components in relation to the underwater light field of some tropical Australian freshwaters
585 *B. W. Webb and D. E. Walling:* Spatial variation of water temperature characteristics and behaviour in a Devon river system
609 *S. M. Spelling and J. O. Young:* The occurrence of metacercariae of the trematode, *Cyathocotyle opaca* (Wisniewski), in three species of lake-dwelling leeches
615 *Helena Korpelainen:* The effects of temperature and photoperiod on life history parameters of *Daphnia magna* (Crustacea: Cladocera)
621 *Stuart E. Bunn:* Spatial and temporal variation in the macroinvertebrate fauna of streams of the northern jarrah forest, Western Australia: functional organization
633 *Carrie A. Rimes and R. Goulder:* Suspended bacteria in calcareous and acid headstreams: abundance, heterotrophic acitivity and downstream change
653 *John R. Allan and Tony J. Pitcher:* Species segregation during predator evasion in cyprinid fish shoals
661 *H. De Haan and T. De Boer:* Geochemical aspects of aqueous iron, phosphorus and dissolved organic carbon in the humic Lake Tjeukemeer, The Netherlands
673 *Stephen T. Threlkeld:* Resource-mediated demographic variation during the midsummer succession of a cladoceran community

685 *Joanne O'Neill Morin:* Initial colonization of periphyton on natural and artificial apices of *Myriophyllum heterophyllum* Michx
695 *P. Hickley and R. G. Bailey:* Fish communities in the perennial wetland of the Sudd, southern Sudan

VOL. 16, NO. 6, DECEMBER 1986

711 *Erlendur Jónsson, Arnthór Gardarsson and Gísli Már Gíslason:* A new window trap used in the assessment of the flight periods of Chironomidae and Simuliidae (Diptera)
721 *Thomas W. Sephton and Colin G. Paterson:* Production of the chironomid *Procladius bellus* in an annual drawdown reservoir
735 *M. Robin Anderson and Jacob Kalff:* Nutrient limitation of *Myriophyllum spicatum* growth *in situ*
745 *David J. Schaeffer and James A. Perry:* Gradients in the distribution of riverine benthos
759 *Landis Hare and John C. H. Carter:* The benthos of a natural West African lake, with emphasis on the diel migrations and lunar and seasonal periodicities of the *Chaoborus* populations (Diptera, Chaoboridae)
781 *W. F. Vincent, W. Wurtsbaugh, P. J. Neale and P. J. Richerson:* Polymixis and algal production in a tropical lake: latitudinal effects on the seasonality of photosynthesis
805 *Bruce C. Chessman:* Diatom flora of an Australian river system: spatial patterns and environmental relationships
821 *Petra H. Lenz, John M. Melack, Barbara Robertson and Elsa A. Hardy:* Ammonium and phosphate regeneration by the zooplankton of an Amazon floodplain lake
831 *David M. Lodge:* Selective grazing on periphyton: a determinant of freshwater gastropod microdistributions
843 **Book Reviews; Short Notices; Announcement**
847 **Author Index to Volume 16**